

### In the Claims

1. (Currently amended) A method for selecting a processor for a system, using a description of system requirements and system desires, said method comprising:

- a) reading a list of processors and their attributes from a processor attribute table,
- b) reading processor requirements from a processor specification list, and
- c) eliminating all processors from said processor attribute table that do not meet said processor requirements to provide an eligible processor attribute table; and
- d) presenting for user selection a list of eligible processors extracted from the processor attribute table.

2. (Original) The method of claim 1) including presenting an error message to the user if all processors have been eliminated from said processor attribute table.

3. (Currently amended) ~~The method of claim 1) further including:~~ A method for selecting a processor for a system, using a description of system requirements and system desires, said method comprising:

- a) reading a list of processors and their attributes from a processor attribute table,
- b) reading processor requirements from a processor specification list,
- c) eliminating all processors from said processor attribute table that do not

meet said processor requirements,

a d) reading processor desires from a processor specification list,

b e) assigning a value of 0 to each remaining processor in said processor attribute table,

e f) adding 1 to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said processor attribute table, and

d f) ranking according to the assigned values, highest to lowest, all processors that have not been eliminated from said processor attribute table.

4. (Currently amended) ~~The method of claim 1) further including:~~ A method for selecting a processor for a system, using a description of system requirements and system desires, said method comprising:

a) reading a list of processors and their attributes from a processor attribute table,

b) reading processor requirements from a processor specification list,

c) eliminating all processors from said processor attribute table that do not meet said processor requirements,

a d) reading processor desires and corresponding values for each desire from a processor specification list,

b e) assigning a value of 0 to each remaining processor in said processor attribute table,

e f) adding the value of each processor desire to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said processor attribute table, and

d g) ranking according to the assigned values, highest to lowest, all processors that have not been eliminated from said processor attribute table.

5. (Withdrawn) The method of determining the corresponding hardware device for a given hardware driver software source code routine, said method comprising:

a) searching for a description in the header of said hardware driver software source code routine, and

b) finding the name of the corresponding hardware device in said description.

6. (Withdrawn) The method of determining the corresponding hardware device for each hardware driver software source code routine in a set of software source code files, said method comprising:

a) searching for a hardware driver software source code routine in all of said set of software source code files,

b) comparing said hardware driver software source code routine with each entry in a list of hardware driver software source code routines and corresponding hardware devices, and

c) repeating a) and b) for each hardware driver software source code routine in said set of software source code files.

7. (Previously presented) A method of creating a description of a hardware system, said method comprising:

a) selecting a processor for a system, using a description of system requirements and system desires, said selecting comprising:

i) reading a list of processors and their attributes from a processor attribute table,

ii) reading processor requirements from a processor specification list,

iii) eliminating all processors from said processor attribute table that do not meet said processor requirements,

iv) reading processor desires from a processor specification list,

v) assigning a value of 0 to each remaining processor in said processor attribute table,

vi) adding 1 to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said processor attribute table,

vii) selecting the processor with the highest assigned value from said processor attribute table, and

viii) selecting hardware representation of said selected processor from a list of hardware representations of processors,

b) determining the corresponding hardware device for a given hardware driver software source code routine, said determining comprising:

i) searching for descriptions in each header of each hardware driver software source code routine,

ii) finding each corresponding hardware device that is named in said description in the header of each hardware driver software source code routine, and

iii) selecting an hardware representation of each corresponding hardware device from a list of hardware representations of hardware devices, and

c) combining said hardware representation of said selected processor with said hardware representation of each selected hardware device into a single hardware representation of an entire system.

8. (Previously presented) The method of Claim 7) wherein said hardware representation comprises a hardware description (HDL) language description.

9. (Previously presented) The method of Claim 7) wherein said hardware representation comprises a physical layout.

10. (Previously presented) The method of Claim 7) wherein said hardware

representation comprises a circuit schematic.

11. (Previously presented) The method of Claim 7) wherein said hardware representation comprises a circuit netlist.

12. (Currently amended) An apparatus for selecting a processor for a system, using a description of system requirements and system desires, comprising

a computer; and

a processor selection program on said computer, wherein said processor selection program comprises:

a) means for reading a list of processors and their attributes from a processor attribute table, and

b) means for reading processor requirements from a processor specification list, and

c) means for eliminating all processors from said processor attribute table that do not meet said processor requirements to provide an eligible

processor attribute table; and

means for displaying a list of processors extracted from the eligible processor attribute table for user selection.

13. (Previously presented) The apparatus of Claim 12) further including means for presenting an error message to the user when all processors have been eliminated from

said processor attribute table.

14. (Currently amended) ~~The apparatus of claim 12)~~ further including An apparatus for selecting a processor for a system, using a description of system requirements and system desires, comprising

a computer; and

a processor selection program on said computer, wherein said processor selection program comprises:

a) means for reading a list of processors and their attributes from a processor attribute table, and

b) means for reading processor requirements from a processor specification list,

c) means for eliminating all processors from said processor attribute table that do not meet said processor requirements,

a d) means for reading processor desires and corresponding values for each desire from a processor specification list,

b e) means for assigning a value of 0 to each remaining processor in said processor attribute table,

e f) means for adding 1 to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said

processor attribute table, and

~~d~~ g) means for ranking according to the assigned values, highest to lowest, all processors that have not been eliminated from said processor attribute table.

15. (Currently amended) ~~The apparatus of claim 12) further including~~ An apparatus for selecting a processor for a system, using a description of system requirements and system desires, comprising

a computer; and

a processor selection program on said computer, wherein said processor selection program comprises:

a) means for reading a list of processors and their attributes from a processor attribute table, and

b) means for reading processor requirements from a processor specification list,

c) means for eliminating all processors from said processor attribute table that do not meet said processor requirements,

~~a~~ d) means for reading processor desires and corresponding values for each desire from a processor specification list,

~~b~~ e) means for assigning a value of 0 to each remaining processor in said processor attribute table,



e f) means for adding the value of each processor desire to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said processor attribute table, and

d g) means for ranking according to the assigned values, highest to lowest, all processors that have not been eliminated from said processor attribute table.

16. (Withdrawn) An apparatus for determining the corresponding hardware device for a given hardware driver software source code routine, comprising:

a computer; and

a hardware device determination program on said computer, wherein said hardware device determination program comprises:

a) means for searching for a description in the header of said a hardware driver software source code routine, and

b) means for finding the name of the corresponding hardware device in said description.

17. (Withdrawn) An apparatus for determining the corresponding hardware device for each hardware driver software source code routine in a set of software source code files, comprising

a computer;

a hardware device determination program on said computer, wherein said

hardware device determination program comprises:

a) means for searching for a hardware driver software source code routine in all of said set of software source code files, and

b) means for comparing said hardware driver software source code routine with each entry in a list of hardware driver software source code routines and corresponding hardware devices,

c) means for repeating a) and b) for each hardware driver software source code routine in said set of software source code files.

18. (Currently amended) An apparatus for creating a hardware description of a hardware system, comprising

a computer;

a hardware description creation program on said computer, wherein said hardware description creation program comprises:

a) means for selecting a processor for a system, using a description of system requirements and system desires, said means for selecting comprising:

i) means for reading a list of processors and their attributes from a processor attribute table,

ii) means for reading processor requirements from a processor specification list,

iii) means for eliminating all processors from said processor attribute table that do not meet said processor requirements,

iv) means for reading processor desires from a processor specification list,

v) means for assigning a value of 0 to each remaining processor in said processor attribute table,

vi) means for adding 1 to the value of each processor in said processor attribute table for each processor desire that is an attribute of said processor in said processor attribute table,

vii) means for selecting the processor with the highest assigned value from said processor attribute table, and

viii) means for selecting a hardware representation of said selected processor from a list of hardware representations of processors,

b) means for determining the corresponding hardware device for given hardware driver software source code routine, said means for determining comprising:

i) means for searching for a description in each header of each hardware driver software source code routine,

ii) means for finding each device that is named in said

description, and

iii) means for selecting a hardware representation of each corresponding hardware device from a list of hardware representations of hardware devices, and

c) means for combining said hardware representation of said selected processor with said physical representation of each selected hardware device into a single physical representation of an entire system.

19. (Previously presented) The apparatus of Claim 18) wherein said hardware representation comprises a hardware description language (HDL) description.

20. (Previously presented) The apparatus of Claim 18) wherein said hardware representation comprises a physical layout.

21. (Previously presented) The apparatus of Claim 18) wherein said hardware representation comprises a circuit schematic.

22. (Previously presented) The apparatus of Claim 18) wherein said hardware representation comprises a circuit netlist.